REMARKS

Claims 1-72 are pending. Claims 1-4 and 9-69 are cancelled as being drawn to a non-elected invention. Claims 6 and 71 are cancelled. Claims 5 and 7 are currently amended to include the limitations of cancelled claim 71. Claim 72 has been amended to depend from claim 7.

Applicants submit that no new matter has been added as a result of this amendment.

Rejection of Claims 5-8 and 70-71 Under 35 U.S.C. §102(b)

Claims 5-8 and 70-71 are rejected under 35 U.S.C. 102(b) in view of Van Ooigen et al. (U.S. 6,022,846).

The Examiner states at page 3 of the Office Action that "an antigen is usually a protein molecule that stimulates an immune response, which involves production of antibodies. In the instant case, phytase protein disclosed in the reference is inherently associated with the property of an antigen because it can produce antibodies when injected into an animal, such as rabbit. In response to Applicant's arguments on inherency, Applicant's attention is drawn to Ullah et al...and Mullaney et al...wherein it is disclosed that phytase (same as disclosed in the prior art) has antigenic property because said phytase could be detected by an immunoblot using antibodies raised against the antigen phytase." (Emphasis added)

Applicants respectfully traverse the rejection.

Applicants submit that for a determination of anticipation to be proper, the prior art reference must disclose each and every limitation of the claim. *Atlas Powder Company et al. v. IRECO, Incorporated et al.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999).

Claims 5 and 7 have been amended to include the limitations of claim 71. That is, claim 5 recites "a stable dry homogenate of a transgenic plant expressing a heterologous protein comprising an antigen or antibody, prepared by a method comprising:

a. obtaining either intact or partitioned transgenic plant material;

b. dehydrating said transgenic plant material;

c. mixing said transgenic plant material into a homogenate either before or after said dehydrating step,

thereby producing a stable dry homogenate of a transgenic plant expressing a heterologous protein, wherein **administration of said homogenate to an animal induces an immune response**.

Claim 7 recites "a stable dry homogenate comprising a dehydrated transgenic plant material containing a transgenic protein, wherein **administration of said homogenate to an animal induces an immune response**."

The instant invention relates to stable dry homogenates of a transgenic plant expressing a heterologous protein comprising an antigen or an antibody wherein **administration of said homogenate to an animal induces an immune response** and which contain a biopharmaceutical product that can be used therapeutically (see page 2, paragraph 0013). The stable dry homogenates of the invention are used to express **proteins that induce an immune response**, wherein the immune response induces a physiological response, for example, contraception.

An "immune response" is defined in the instant specification at pages 7-8, paragraph 0113 as "a response made by the immune system of an organism to a substance, which includes but is not limited to foreign or self proteins."

Applicants submit that one of skill in the art would clearly accept that not all antigens induce an immune response. In Janeway, Travers, Walport and Schlomchik Immunobiology 2001 Garland Publishing page 684 (attached) an antigen is defined as follows:

> "An antigen is any molecule that can bind specifically to an antibody. Their name arises from their ability to generate antibodies. However, some antigens do not, by themselves, elicit antibody production; those antigens that can induce antibody production are called immunogens."

It is also stated at page 613 of Janeway et al. (attached) that:

> "[a]ny substance that can elicit an immune response is said to be immunogenic and is called an immunogen. There is a clear operational distinction between an immunogen and an antigen. An antigen is defined as any substance that can bind to a specific antibody. All antigens therefore have the potential to elicit specific antibodies, but some need to be attached to an immunogen in order to do so. This means that although all immunogens are antigens, not all antigens are immunogenic."

The Van Ooigen et al. reference does not teach or suggest "a stable dry homogenate of a transgenic plant expressing a heterologous protein comprising an antigen or antibody, wherein **administration of the homogenate to an animal induces an immune response**" as required by the instant claims.

The Van Ooigen et al. reference does not teach or suggest that the disclosed, recombinantly produced phytase induces an immune response when administered to an animal. Although the Van Ooigen et al. references teaches assays for detecting phytase activity, the Van Ooigen et al. reference **does not teach the ability of phytase to induce an immune response.**

In view of what was know in the art as of the filing date of the application regarding the distinction between antigens and an immunogen, it is clearly neither necessarily or inherently true that phytase recombinantly produced according to the methods of Van Ooigen et al. induces an immune response when administered to an animal, as required by the instant claims.

Applicants submit that the Examiner must provide rationale or evidence tending to show inherency to properly make a rejection under 35 U.S.C. 102 when the prior art is silent as to an inherent characteristic (MPEP §2112).